

7. DOCTOR-DIAGNOSED HIGH BLOOD PRESSURE

Measure Definition: *“Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?” [Yes, excluding females told during pregnancy or people told they have borderline high blood pressure or are pre-hypertensive]*

Why is high blood pressure important to public health?

Heart disease and stroke are the number one and number three causes of death, respectively, in the United States and Utah. Approximately 4,000 people die of one of these two diseases in Utah each year. High blood pressure is a leading cause for these two diseases. Hypertension, often called high blood pressure, is defined as a systolic blood pressure of 140mm Hg or higher or a diastolic blood pressure of 90mm Hg or higher. Through regular blood pressure measurement, a doctor can diagnose high blood pressure. According to the American Heart Association, blood pressure measurement should be performed at least every two years after a normal reading. Hypertension is related to an increased incidence of heart disease, which includes heart attack, stroke, atherosclerosis (hardening of the arteries), and coronary artery disease (narrowing of the blood vessels that supply blood and oxygen to the heart). Individuals with high blood pressure should take steps to reduce and control their blood pressure.¹⁴

Risk factors for high blood pressure

Everyone has blood pressure, it is a sign that the heart is working and pumping blood through the body. Blood pressure varies throughout the day based on activities, emotions, stress, drug use (including prescriptions), time of day, alcohol use, smoking, diet, and many other factors. Prolonged elevated blood pressure can be dangerous because it means the heart is working too hard to pump the blood throughout the body. This can lead to weakening of the arteries and veins, which can cause a heart attack or stroke. People can lower their blood pressure by being physically active and eating a diet low in salt and high in fruits and vegetables. If this does not work, there are many types of medications that can lower a person's blood pressure.

Some women develop high blood pressure during pregnancy. This is known as gestational hypertension. Approximately 6% to 8% of pregnant women will develop high blood pressure.¹⁵ Usually blood pressure returns to normal following pregnancy.

High blood pressure in Utah

Rates for high blood pressure have remained relatively unchanged over the past decade in Utah. Between 2001–2005, the age-adjusted percentage of adults with high blood pressure was 22.4%. The age-adjusted rate varied by local health district from a low of 17.7% (Summit Co.) to a high of 29.5% (Tooele Co.). Three health districts had rates higher than the state, and one had rates lower than the state rate. Four of Utah's 61 small areas had age-adjusted rates that were significantly lower than the state, and eight small areas had rates that were significantly higher than the state rate. Eight small areas had rates that were significantly lower than the U.S. rate.

In 2005, respondents with high blood pressure were asked if they were taking steps to reduce their blood pressure, and 96.5% said they were taking some form of action to control their blood pressure, including taking medication, reducing alcohol intake, eating better, exercising more, and reducing salt intake. Of those taking

Utah Objective: Same as HP2010 objective.

HP2010 Objective (related) 12-9: Reduce the proportion of adults aged 20 years and older with high blood pressure to 16% (age-adjusted to the U.S. 2000 standard population).

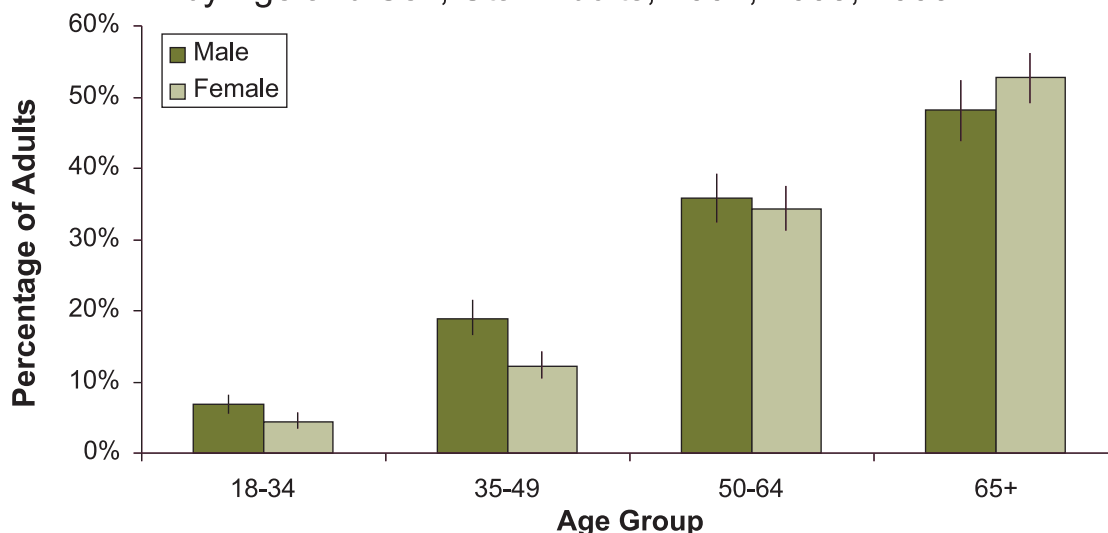
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High blood pressure in Utah (continued)

action, 1.5% were taking medication alone, 53.6% were taking medication and doing at least one other thing, and 44.9% were doing something other than taking medication.

Men aged 18–34 and 35–49 were significantly more likely to be told they had high blood pressure than women of the same age group ($p=0.01$ and $p<0.001$, respectively). Significant differences between sexes were not observed in other age groups. Chances of a respondent having high blood pressure increased with age.

Figure 7.A: Doctor-diagnosed High Blood Pressure by Age and Sex, Utah Adults, 2001, 2003, 2005

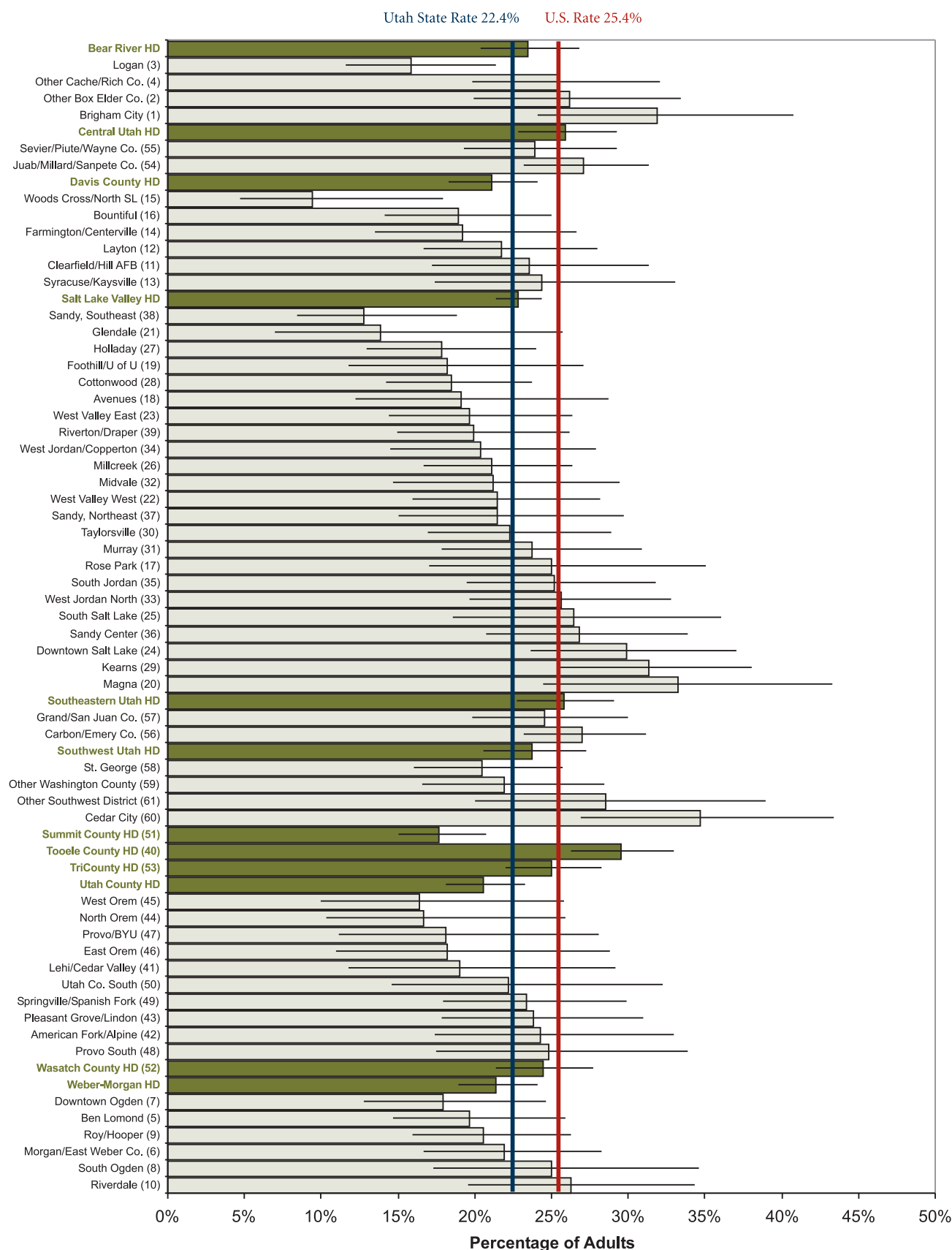


Prevention/Resources

The Heart Disease and Stroke Prevention Program (HDSPP) at the Utah Department of Health has a goal to decrease the number of heart disease and stroke-related deaths in the state. One way this is being addressed is by educating providers on current recommendations for blood pressure levels and treatment. For a copy of the manual that was produced for these teaching opportunities, please contact the HDSPP program at 801-538-6141. Many insurance companies and community health centers provide patients diagnosed with high blood pressure with a patient self-management kit that teaches the patient about high blood pressure and how to lower it. The kit also provides resources for getting more physical activity (a pedometer), a recipe book on “Dietary Approaches to Stop Hypertension” (DASH), and resources on how to take a blood pressure measurement so that they can monitor it at home or away from the clinical setting. The kit helps patients know what questions to ask their doctor so that they can discuss their disease more easily with their physician and empowers them to manage their blood pressure. The HDSPP provides more information at <http://www.hearhighway.org>. The National Institutes of Health provides resources, fact sheets, and answers to questions at <http://health.nih.gov>. The American Heart Association administers a comprehensive website for consumers and health care providers at <http://www.americanheart.org>.

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Figure 7.1: Percentage of Adults Reporting Doctor-diagnosed High Blood Pressure by Local Health District and Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)



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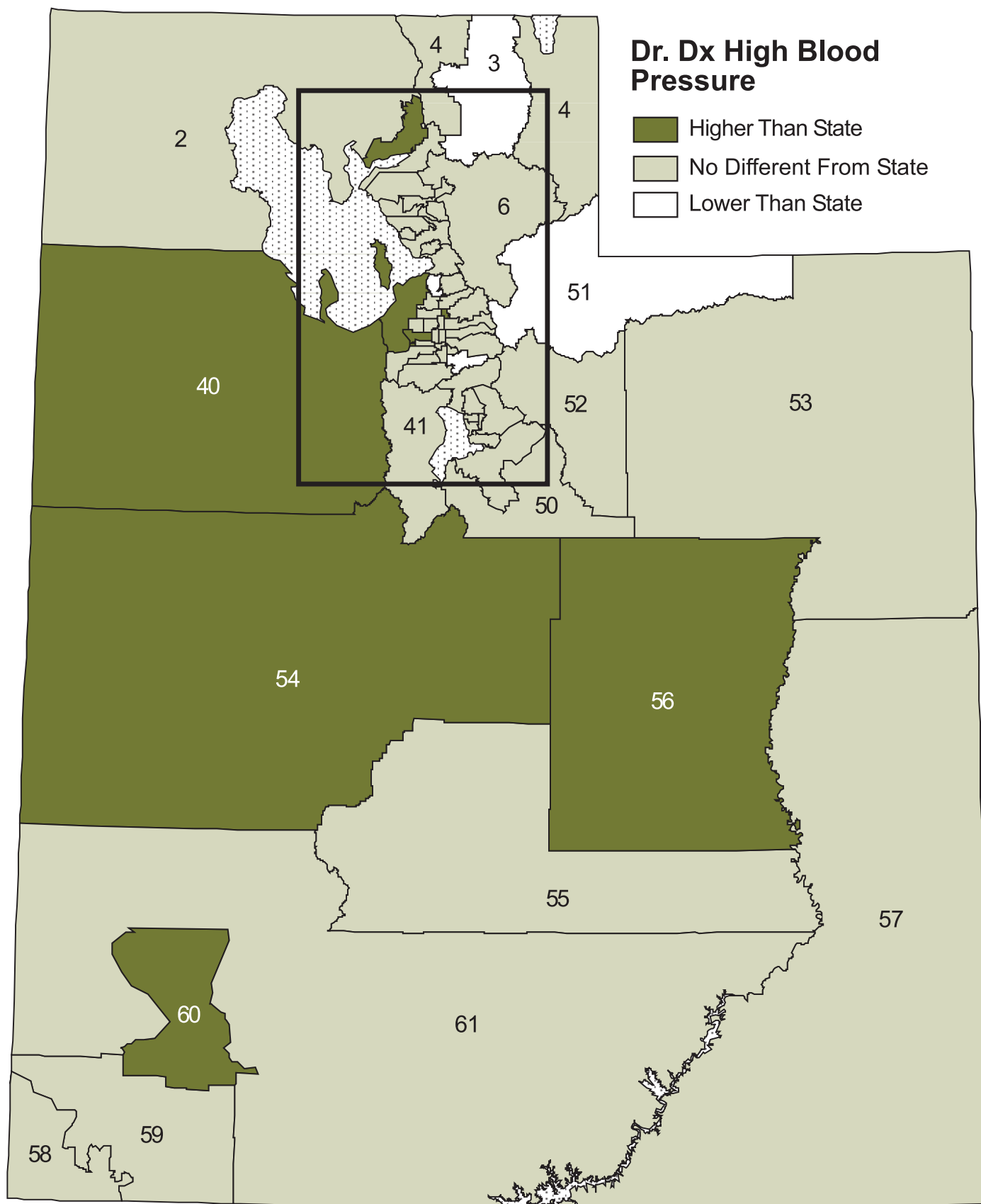
Table 7: Dr. Dx High Blood Pressure by Health District, Small Area, Utah, and U.S., 2001, 2003, 2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults With Dr. Dx High Blood Pressure	Crude Rate	Age-adjusted Rate	95% Confidence Interval	
						Lower	Upper
	U.S.	217,803,051	56,410,990	25.9%	25.4%	25.3%	25.6%
	State of Utah	1,657,454	327,513	19.8%	22.4%	21.5%	23.3%
	Bear River HD	98,027	18,968	19.4%	23.4%	20.4%	26.8%
59	Brigham City (1)	14,566	4,246	29.2%	31.8%	24.1%	40.7%
4	Logan (3)	45,904	4,967	10.8%	15.9%	11.6%	21.4%
49	Other Box Elder Co. (2)	14,636	3,751	25.6%	26.1%	20.0%	33.4%
47	Other Cache/Rich Co. (4)	22,921	5,611	24.5%	25.5%	19.9%	32.0%
	Central Utah HD	47,558	12,256	25.8%	25.8%	22.8%	29.2%
54	Juab/Millard/Sanpete Co. (54)	31,637	8,409	26.6%	27.1%	23.2%	31.3%
37	Sevier/Piute/Wayne Co. (55)	15,921	3,875	24.3%	23.9%	19.3%	29.3%
	Davis County HD	175,027	31,592	18.1%	21.1%	18.3%	24.1%
14	Bountiful (16)	33,318	6,387	19.2%	19.0%	14.1%	25.0%
34	Clearfield/Hill AFB (11)	37,329	6,783	18.2%	23.6%	17.2%	31.3%
17	Farmington/Centerville (14)	19,034	3,316	17.4%	19.2%	13.5%	26.7%
28	Layton (12)	46,815	8,750	18.7%	21.8%	16.6%	28.0%
39	Syracuse/Kaysville (13)	24,542	5,151	21.0%	24.4%	17.4%	33.1%
1	Woods Cross/North SL (15)	13,989	1,175	8.4%	9.4%	4.7%	17.9%
	Salt Lake Valley HD	658,810	133,673	20.3%	22.8%	21.4%	24.3%
16	Avenues (18)	18,959	3,576	18.9%	19.1%	12.2%	28.7%
13	Cottonwood (28)	33,297	7,449	22.4%	18.5%	14.2%	23.8%
57	Downtown Salt Lake (24)	42,808	10,514	24.6%	29.9%	23.7%	37.0%
11	Foothill/U of U (19)	17,778	3,419	19.2%	18.2%	11.8%	27.1%
3	Glendale (21)	18,642	1,987	10.7%	13.9%	7.0%	25.7%
8	Holladay (27)	35,956	7,738	21.5%	17.8%	13.0%	24.0%
58	Kearns (29)	42,995	10,740	25.0%	31.3%	25.4%	38.0%
60	Magna (20)	15,623	3,778	24.2%	33.2%	24.5%	43.3%
25	Midvale (32)	21,672	3,673	17.0%	21.2%	14.7%	29.5%
24	Millcreek (26)	44,008	11,490	26.1%	21.1%	16.7%	26.3%
35	Murray (31)	24,072	6,057	25.2%	23.8%	17.9%	30.9%
20	Riverton/Draper (39)	41,391	5,050	12.2%	19.9%	14.9%	26.1%
44	Rose Park (17)	22,639	4,408	19.5%	25.0%	17.0%	35.1%
52	Sandy Center (36)	36,106	8,041	22.3%	26.8%	20.8%	33.8%
27	Sandy, Northeast (37)	18,245	3,456	18.9%	21.5%	15.1%	29.7%
2	Sandy, Southeast (38)	20,781	2,336	11.2%	12.8%	8.4%	18.8%
46	South Jordan (35)	20,931	3,820	18.3%	25.2%	19.5%	31.8%
51	South Salt Lake (25)	18,456	4,775	25.9%	26.4%	18.6%	36.1%
32	Taylorsville (30)	27,372	5,622	20.5%	22.3%	16.9%	28.9%
48	West Jordan North (33)	30,391	5,616	18.5%	25.7%	19.6%	32.8%
21	West Jordan/Copperton (34)	26,360	5,045	19.1%	20.4%	14.5%	27.9%
19	West Valley East (23)	35,527	7,770	21.9%	19.7%	14.4%	26.4%
26	West Valley West (22)	44,794	7,794	17.4%	21.4%	16.0%	28.2%
	Southeastern Utah HD	36,828	9,273	25.2%	25.7%	22.7%	29.0%
53	Carbon/Emery Co. (56)	21,451	5,642	26.3%	27.0%	23.2%	31.2%
41	Grand/San Juan Co. (57)	15,377	3,498	22.8%	24.5%	19.8%	30.0%
	Southwest Utah HD	116,150	27,795	23.9%	23.7%	20.6%	27.2%
61	Cedar City (60)	22,401	5,968	26.6%	34.7%	26.9%	43.4%
55	Other Southwest District (61)	15,384	4,757	30.9%	28.5%	20.0%	38.9%
30	Other Washington County (59)	32,503	6,835	21.0%	22.0%	16.6%	28.5%
22	St. George (58)	45,862	9,668	21.1%	20.5%	16.1%	25.7%
7	Summit County HD (51)	24,525	3,541	14.4%	17.7%	15.0%	20.8%
56	Tooele County HD (40)	32,458	8,644	26.6%	29.5%	26.3%	33.0%
45	TriCounty HD (53)	28,023	6,726	24.0%	25.0%	22.0%	28.2%
	Utah County HD	278,832	41,853	15.0%	20.6%	18.1%	23.3%
38	American Fork/Alpine (42)	26,819	5,723	21.3%	24.3%	17.4%	32.9%
12	East Orem (46)	14,955	2,789	18.7%	18.2%	11.0%	28.8%
15	Lehi/Cedar Valley (41)	18,752	2,211	11.8%	19.0%	11.7%	29.2%
6	North Orem (44)	25,965	3,768	14.5%	16.7%	10.3%	25.9%
36	Pleasant Grove/Lindon (43)	24,636	4,127	16.8%	23.8%	17.9%	31.0%
10	Provo/BYU (47)	39,401	4,413	11.2%	18.1%	11.2%	28.0%
42	Provo South (48)	48,138	4,852	10.1%	24.8%	17.5%	33.9%
33	Springville/Spanish Fork (49)	41,036	6,828	16.6%	23.4%	17.9%	29.9%
31	Utah Co. South (50)	17,363	2,860	16.5%	22.2%	14.6%	32.3%
5	West Orem (45)	21,774	2,746	12.6%	16.4%	10.0%	25.8%
40	Wasatch County HD (52)	12,514	2,833	22.6%	24.4%	21.4%	27.7%
	Weber-Morgan HD	148,702	29,859	20.1%	21.4%	18.9%	24.1%
18	Ben Lomond (5)	33,215	5,992	18.0%	19.7%	14.6%	25.9%
9	Downtown Ogden (7)	21,684	4,580	21.1%	18.0%	12.8%	24.7%
29	Morgan/East Weber Co. (6)	24,131	5,026	20.8%	21.9%	16.7%	28.2%
50	Riverdale (10)	15,522	3,590	23.1%	26.3%	19.6%	34.3%
23	Roy/Hooper (9)	27,898	4,854	17.4%	20.6%	15.9%	26.2%
43	South Ogden (8)	26,255	6,401	24.4%	25.0%	17.3%	34.6%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

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Figure 7.2: Dr. Dx High Blood Pressure by Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)



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Figure 7.3: Dr. Dx High Blood Pressure by Small Area, Wasatch Front Adults 18+, 2001, 2003, 2005 (Age-adjusted)

